

ABSTRACT OF THE DISCLOSURE

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3 A method of managing oil fields include installing oil field
4 sensors in a conventional manner, coupling the sensors to a local
5 CPU having memory, programming the CPU for data collection and
6 data analysis, providing a central web server coupled to the
7 Internet, and coupling local oil field CPUs to the web server.
8 Human experts are granted access oil field data in real time via
9 the Internet by connecting to the web server and requesting data
10 for a particular oil field. The local CPUs provide different
11 levels of data to the web server. The web server provides the
12 option to view raw data, partially analyzed data, or fully
13 analyzed data. The local CPUs are programmed with parameters for
14 analyzing the data and automatically determining the presence of
15 anomalies. Upon detecting the occurrence of an anomaly, the local
16 CPUs are programmed to notify one or more human experts by email,
17 pager, telephone, etc. If no human expert responds to the
18 notification within a programmed period of time, the local CPU
19 automatically takes a programmed corrective action. According to
20 a presently preferred embodiment, a "correlation check" is
21 provided which utilizes signal processing methods to analyze data
22 without utilizing an underlying model of the reservoir.